

The greatest benefit the present invention enjoys is the performance of real-time processing. This is due to efficiencies of the method taught.

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CLAIMS

1. A method for creating a novel viewpoint image from a plurality of images comprising the steps of
  - 10       a. Simultaneously and continuously acquiring sets of images from a plurality of cameras; and
  - b. Using predetermined background based correspondence fields to detect novel objects; and
  - 15       c. Assigning the image representations for these objects likely new correspondences; and
  - d. Testing these likely new correspondences and further improving upon them in a refinement step; and
  - 20       e. Using the resulting correspondences, construct a novel viewpoint image.

2. The method in claim 1 wherein

- a. The background based correspondence field is generated by an automatic means that, on an application basis, slowly changes to accommodate such slow changes in the background environment.

3. The method in claim 1 wherein

- a. The assignment of image representation likely new correspondences is random.

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4. The method in claim 1 wherein

- a. There is no testing step or further improvement

5. The method in claim 1 wherein:

- a. Parts of the scene that become visible in the novel viewpoint image for which no data are present in the image being warped because of occlusion in the said image being warped are provided by some other image from yet another viewpoint for which appropriate correspondences exist.

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